DOCUMENT RESUME

ED 194 163 JC 800 602

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TITLE Personal Achievement Reading: Auto Repair.
INSTITUTION Kirkwood Community Coll., Cedar Rapids, Iowa.
SPONS AGENCY Fund for the Improvement of Postsecondary Education (DHEW), Washington, D.C.
PUB DATE 77
NOTE 109p.

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Auto Mechanics; Community Colleges; Context Clues; Dictionaries; Morphemes; *Reading Skills; Study Skills; Two Year Colleges; Vocabulary Development; *Vocabulary Skills; Word Recognition; Workbooks

ABSTRACT

Exercises are provided in this set of four workbooks designed to aid students in auto repair programs in building vocabulary and reading skills. Each workbook borrows from the vocabulary of auto mechanics to provide explanations and exercises for a sequential series of instructional objectives. One workbook concentrates on developing the ability to determine word meanings through contextual inference. Exercises in this booklet are designed to demonstrate the variety of meanings a word can have in different contexts and to caution students about the limitations of using context clues to determine word meaning. Another workbook helps students recognize and define word roots, suffixes, and prefixes common in automotive terminology. Special emphasis is placed on using word parts to define words with which students may not be familiar. A third workbook presents exercises which help the student make efficient use of the dictionary, by reinforcing the student's understanding of alphabetical order and of the components of a dictionary entry. The fourth workbook discusses and illustrates learning strategies to be used by the student in mastering technical vocabulary encountered in reading assignments. Accompanying the exercises in these four workbooks are pre- and post-tests designed to help students assess their progress in relation to each of the instructional objectives covered. (JP)

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PERSONAL ACHIEVEMENT

READING

Auto Repair

Prepared by

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Fund for the Improvement of Postsecondary Education

JC 800 602

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1977

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PERSONAL ACHIEVEMENT

READING

Auto Repair

Clues to Word Meaning

PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

Select the appropriate meaning for common words according to the context in which they are used. 80% = mastery

1. The doctor said the operation was a success.

   a) business system
   b) surgery
   c) running of a machine
   d) amputation

2. The smog alert lasted three days.

   a) awake
   b) a warning
   c) to warn someone
   d) small animal

3. The mechanic said the part hadn't come in yet.

   a) separate
   b) role in a play
   c) piece of equipment
   d) leave

4. The plant grew two new leaves this week.

   a) factory
   b) vegetation
   c) put in the ground
   d) salad

5. I tried to nurse the baby bird back to health.

   a) sip slowly
   b) hand bag
   c) a person in the medical field
   d) care for and heal

Obj. 2

Select the correct meaning of the underlined word by using the context clues. 80% = mastery

1. When I first went to Russia, dissident voices were silent. Today there are a few that are outspoken, and others that are not.

   a) disagreeing
   b) friendly
   c) dangerous
   d) religious

2. The inevitable trend is automation. Someday a jet liner will be built that will fly itself from take off to touch-down.

   a) slow
   b) certain
   c) scary
   d) rapid

3. Those wetlands teem with geese. In the fall, when the Canada geese leave, the whole landscape seems to take off.

a) pain up
b) are noisy
c) play games
d) are full of

4. Eventually the anti-metric feeling died away. Great Britian began conversion to the metric system in 1965.

a) change to
b) legalize
c) do away with
d) campaign for

5. The Federal Republic of Germany has emerged as Western Europe's strongest most prosperous nation. How did it happen?

a) won
b) fought
c) appeared
d) disappeared

Obj. 3

Write the correct meaning of the underlined word by using the definition clues. 80% = mastery

1. The portal, on door, swung open wide.
meaning of portal _____

2. The sedating drug began to have an effect, since the patient grew quiet and sleepy.
meaning of sedating _____

3. The schedule for the day precluded playing tennis; there just wasn't enough time.
meaning of precluded _____

4. Origami, or paper folding, is an old art.
meaning of origami _____

5. Her absence caused total chaos. Everything was in a confused mess.
meaning of chaos _____

Obj. 4 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using the example clues. 80% = mastery

1. Duplication machines, such as a ditto master or a thermo fax speed up office processes to a great extent.

meaning of duplicating machines _____

examples of duplicating machines _____

2. Raw crops such as corn and soybeans are a mainstay to Iowa's economy.

   meaning of raw crops _____

   examples of raw crops _____

3. Power tools like a hydralic jack or an air wrench are a necessity for a good auto mechanic today.

   meaning of power tools _____

   examples of power tools _____

4. Food additives such as cyclamates, and saccharin are prohibited by the FDA.

   meaning of food additives _____

   examples of food addictives _____

5. Emphysema and asthma are examples of respiratory ailments.

   meaning of respiratory ailments _____

   examples of respiratory ailments _____

Obj. 5 [NOT APPLICABLE TO AUTO REPAIR]

Write the correct meaning of the underlined word by using contrast clues. 80% = mastery

1. Unlike the trim lightweight Danish furniture, some of the old Victorian furniture is ponderous.
   ponderous means _____

2. While Jim is a rather lethargic individual, his brother Matt is energetic, alert, and always on the go.
   lethargic means _____

3. In contrast to some modern dissonant jazz, old time jazz was melodic and harmonious.
   dissident means _____

4. Sam wanted to consolidate the two businesses into one, whereas Joe wanted to keep them seperate.
   consolidate means _____

5. The President wanted total and immediate withdrawal of all troops. On the other hand, the Secretary favored more gradual phase out of the troops.
   phase out means _____

Obj. 6 [NOT APPLICABLE TO AUTO REPAIR OR BUSINESS]

Write the correct meaning of the underlined word by using the inference clue. 80% = mastery

1. After he was hung, his name was <u>exonerated</u> when his family proved he had been innocent.

   a) cleared
   b) forgotten
   c) hated
   d) revered

2. There will be <u>sufficient</u> food as soon as the crops are harvested.

   a) scarce
   b) too much
   c) enough
   d) an absence of

3. The pantomime artist must <u>exaggerate</u> every movement to make it seem larger than life.

   a) act out
   b) practice
   c) hide
   d) overdo

4. The filth and poverty in that slum was <u>deplorable</u>.

   a) moderate
   b) going away
   c) pitiable
   d) increasing

5. Human rights have become a major <u>aspect</u> of U.S. foreign policy.

   a) problem
   b) part of
   c) army
   d) love

Obj. 7 [OBJ. 4 FOR AUTO REPAIR, OBJ. 6 FOR BUSINESS]

Identify the reference pronouns and their referents in the following sentence. 80% = mastery

1. The bags contained gold jewelry, and they were missing the morning after the robbery.

   pronoun _____ referent _____

2. Many people have given all they had in the fight for freedom.

   pronoun _____ referent _____

3. If it hails now, the farmers are likely to loose most of the crops, but they can apply for crop damage insurance.

   pronoun _____ referent _____

4. The forest was turned to a charred battlefield as the fire consumed it.

   pronoun _____ referent _____

5. The machine wore out because it hadn't been given the proper maintenance care.

   pronoun _____ referent _____

Obj. 8

[OBJ. 7 FOR BUSINESS, OBJ. 5 FOR AUTO REPAIR]
100% correct = mastery

Write two (2) limitations of using context clues in determining word meaning.

1.

2.

ANSWER KEY
PRE/POST TEST
CLUES TO WORD MEANINGS

Obj. 1

1. B
2. B
3. C
4. B
5. D

Obj. 2

1. A
2. B
3. D
4. A
5. C

Obj. 3

1. door
2. quieting, calming
3. ruledant, eliminated
4. paper folding
5. total confusion

Obj. 4

1. machines that duplicate on copy
   - ditto master, thermofax
2. crops grown in rows
   - corn, beans
3. tools that use external energy
   - hydralic jack, power wrench
4. chemicals added to foods
   - cyclamates, saccharin
5. lung problems
   -emphysema, asthma

Obj. 5

1. huge, heavy
2. sluggish, slow
3. harsh, discordant
4. merge
5. elimination

Obj. 6

1. A
2. C
3. D
4. C
5. B

Obj. 7

1. they - bags
2. they - people
3. they - farmers
4. it - forest
5. it - machine

Obj. 8

1. The context sometimes doesn't always reveal the words meaning.

2. The context may mislead you about a words meaning.

CLUES TO WORD MEANING: AUTO REPAIR

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CLUES TO WORD MEANING

By itself, a word does not have a clear, precise meaning. Suppose someone were to ask you the meaning of "field". You wouldn't be able to answer because "field" as presented to you does not have a clear definite meaning. But, if that person were to say, "cornfield" you would immediately know he/she is talking about an area of land where corn is raised. If, on the other hand, someone says, "WOW, he can really field that ball!" you would know that in this context "field" means to catch a ball.

The sentences or words surrounding a particular word are called the context. The context can give you the meaning not only of familiar words like "field", but also of new or difficult words. The writer frequently gives the meaning of a new word in the same paragraph or near by so that you don't have to go as far away as a dictionary or even a glossary to find definitions while you are reading.

In this unit you will work on:

(1) special meanings for commonly used words and

(2) getting meanings of words from the context.

When you learn these skills, you will enlarge your vocabulary and become a better reader.

OBJECTIVE 1

You will be able to select the appropriate Auto Repair meaning for ten common words.

STRATEGY

A word may have more than one meaning. Its meaning depends on the way it is used. Take "hit" for example. A "hit" is what a baseball player gets if his bat connects with the ball; you can "hit" someone else (provided you're bigger than they are), or you can "be a hit" (popular, well received) if you do something everyone else admires.

A "hit" can also be a popular song, a new recipe or a movie - - - anything very successful. A teacher may only have time to "hit" the high spots in one class period; your father may "hit the roof" when you're late getting home; or a friend may "hit" you for a $5.00 loan.

Have you ever "hit" the books, "hit" the hay, or better yet"hit" the jackpot? The definition of "hit" all depends on the context it's used in.

1. You have seen and used all of the following words. Each word has multiple meanings, some of which we don't use as often as others. See how many different ways you can use each word. Trying them in sentences may help you. For example, use the word "stick".

a. A "stick" is a piece of wood.

b. You can "stick" (poke) someone in the ribs.

c. A nickname will often "stick" with a person as he/she grows older.

d. Would you care for a "stick" of gum?

There are many more meanings for "stick". Can you add others to this list?

Now try these. See how many different ways you can use each word.

a. set

b. book

c. pot

d. spring

e. bear

2. As you read Auto Repair manuals, books, charts, etc., you will often see a common word used in a new or different way. You will need to pay special attention to these words even though they appear to be easy and common.

For instance, you may be familiar with the following terms, but do you know what they mean when referring to auto body work?

	Common Meaning	Meaning as Related to Auto Repair
a. cure		
b. dryer		
c. frame		
d. holiday		
e. skirt		
f. apron		
g. bleeding		
h. finish		
i. lazy back		
j. dolly		

You may use your textbook to find out the special meanings. Look up the words in either the glossary or the index at the back of the book.

3. Auto Repair language is filled with common words that have special meanings when used in reference to autos or auto parts. The best way for you to keep from getting totally confused by such terms is to become familiar with them and practice using them. Many of these terms actually make sense when you STOP and THINK about them.

FOR EXAMPLE:

(a) A regulator is the name for the mechanism for raising and lowering (regulating) a window.

(b) The rear deck area is the trunk area of a car.

See if you can correctly match the following terms with their meanings. See how many you can get without referring to your book, then check your answers with the answer key.

____ 1.	toe board	a. two protruding parts which support the bumper
____ 2.	floor board	b. hood which folds up from both sides
____ 3.	tailgate	c. metal division between the passenger and the engine
____ 4.	lift gate	d. chrome bumper
____ 5.	bi-fold hood	e. braces behind a chrome bumper
____ 6.	face bar	f. diagonal panel between the engine and the passenger on which to rest one's feet
____ 7.	back bar	g. bottom half of a stationwagon rear door
____ 8.	fire wall	h. top half of a stationwagon rear door
____ 9.	frame horns	i. flat panel on the floor of a car

When you have completed these definitions, check your answers with the answer key and see your instructor for a post-test.

OBJECTIVE 2

You will be able to determine the meaning of at least eight (8) given words by using context clues.

STRATEGY

Not only does the context decide the meanings of familiar words, but it also gives you an idea of the meanings of words you don't know or haven't seen before.

Often you can tell the meaning of a word by reading the words around it. When you come to a new word read to the end of the sentence (or paragraph) to see if you can figure out the meaning.

Example #1: Glumpf (This is a made-up word. See if you can figure out its meaning.)

a. Fred is very good in glumpf.

(We don't know the meaning of this sentence because we don't know the last word. Go on to the next sentence.)

b. He was in glumpf league last summer.

(There are two clues given in this sentence. What are they?)

A. _____ B. _____

c. He can throw a glumpf so slow that you can count the stitches.

(Glumpf hasn't changed; we've only surrounded it with different words.)

d. Last year he visited the Glumpf Hall of Fame in Ccopers-town, New York.

(What is the new clue given here? _____)

e. From the clues given in the above sentences we know that glumpf means _____. (Fill in the blank.)

> REMEMBER: Think about all the words you know to see if you can figure out the words you don't know.

#2. Now see if you can figure out the meaning of the underlined words in these sentences by using the context. The questions in parenthesis will help you think through the process.

a. The deep-sea diver used a special searchlight to help him see in the murky waters.

(What would a deep-sea diver use a searchlight for?)

b. The balloon ascended to a height of six hundred feet.

(What would a balloon have to do to reach 600 feet?)

c. The fire was extinguished with a special kind of liquid foam.

(What might liquid foam do to a fire?)

murky means _____

ascended means _____

extinguished means _____

#3. The examples above have the most obvious type of contextual clue -- there can be no doubt about the meanings of the words. You only had to use common sense or recall an experience you have had or read about to decide the meanings. We know from experience how people and things act in a given situation. Consequently, we can come close to figuring out the meaning of the word by looking at the situation (the whole sentence) and recalling what a logical outcome would be.

Here is another example of a common sense context clue. Can you tell what magnify means in the sentence below?

The microscope is of the utmost importance in the study of biology because it can magnify objects too small to be seen by the naked eye.

(What is a microscope used for? For enlarging or making things which are usually too small to be seen look bigger. Therefore, magnify means to make things look larger.)

Here are some "common sense" and "common experience" contexts. Each sentence contains a clue or clues to the meaning of the underlined word. Decide the meaning by using common sense or recalling some experience you know about, as in the examples above. Then choose the best meaning for the word according to the context.

____ a. The basketball game was a fiasco, with our team scoring 21 points to their 104.

(1) success
(2) disaster
(3) challenge

____ b. The heart attack victim was resuscitated through the use of mouth-to-mouth breathing.

(1) brought back to consciousness
(2) forced to lie down
(3) helped to his feet.

____ c. Those first confusing days, the thoughts of a new student at Kirkwood drift back to high school or home where she was "in", knew everyone and felt comfortable. A feeling of nostalgia sweeps over her.

(1) delight
(2) sadness
(3) homesickness

Although (2) is a possible answer, (3) is the best answer because it is more specific in terms of the sentences given here. As you can see, the context clue is sometimes in front of the word.

Use the context to determine the meanings of the following underlined words:

d. An old obsolete bus in poor condition was used to evaluate brake performance.

obsolete means _____

e. Most chronic braking troubles including "brake squeal" can be minimized or eliminated if the brakes are analyzed and then balanced.

minimized means _____

f. In draining the air brake system, do not look into the air jets or direct them toward a person as dirt may be entrained in the air system.

entrained means _____

g. Brake chambers and slack adjustors convert the energy of compressed air into mechanical force and motion.

convert means _____

h. A car or truck with a damaged or weakened frame or underbody can be a menace on the highway, not only to the people who are riding in the vehicle, but also to people and property along the right of way.

menace means _____

i. At one point during the hurricane, the winds reached a velocity of 130 miles an hour.

velocity means _____

j. The hot rod race ended in a tie when Paul in "Blue Lightening" and Andy in the "Yellow Streak" crossed the finish line simultaneously.

simultaneously means _____

Check your answers with the answer key. If you got nine (9) or more correct, go on to the next objective. If you missed more than one, see your instructor.

OBJECTIVE 3

You will be able to identify definition context clues. You will be able to determine the meaning of nine (9) out of ten (10) given words by using definition clues.

STRATEGY

Sometimes authors realize they have used words you, the reader, may not know. In that case they may give an outright definition or explanation of its meanings to help you. In other words, a definition of a difficult word may be clearly stated in the same sentence or at least the same paragraph.

a. Very often the author will even include a picture or diagram to help you visualize what he is describing. Example #1 is taken from one of your class textbooks.

Example #1: "A typical closed cab is shown in Fig. 1-20. All of the component parts of a closed cab are clearly labeled in this illustration." (Automotive Collision Work, p. 20)

b. A definition or explanation clue is often indicated by a form of the verb "to be", as in this example. (The clue is underlined twice.)

Example #2: "The floor pan is usually composed of several smaller panels which are either welded together or secured to one another by bolts . . ." (Automotive Collision Work, p.13)

c. Sometimes a definition clue appears in the form of description. Again, a form of the verb "to be" is usually used.

CAUTION:

Be sure the description is a fairly precise one before you rely on it for a definition. This sentence, "A gazelle has four thin legs and is very nimble-footed," is too general and value to be a definition.

However, Example #4 is a more precise description, and therefore a good definition.

EXAMPLE #4: The griffin was a mythological monster with an eagle's wings, head, and beak, and a lion's body, legs, and tail.

In the following sentences, identify the definition clue. Then write out the meaning of the underlined word using that clue.

1. A balanced breaking system is one in which the brake lining contacts the brake drums on all the wheels at the same instant and at the same air pressure.

2. An oxygen acetylene flame can be used for fusing practically any kind of metal. Because oxygen and acetylene are both gases, the process is commonly called gas or torch welding.

3. The In-Line Single Check Valve is a device placed in an air line to allow air flow in one direction only and to prevent flow of air in the reverse direction.

4. Roto-Wedge Actuators are used to operate wedge type foundation brakes. They convert compressed air energy into mechanical force and movement.

5. You have probably seen examples of dog tracking, a type of misalignment in which a car seems to travel in a partially sidewise manner.

6. A hydraulic ram, Fig. 7-13, is a simple portable tool available for frame and underbody straightening.

7. The passenger carrying compartment of a car is called the body proper.

8. Outer construction can be likened to the skin. In fact, some body experts use the term "skin" when referring to the outer surfaces of an automobile.

9. Therefore, the net force, or filtration pressure, represents the glomerular pressure.

10. We must all soon learn how to compute in the metric system which is a decimal system of weights and measures universally used in science.

Check your answers. If you missed more than one, see your instructor. Otherwise, go on to the next objective.

OBJECTIVE 4

(1) You will be able to identify reference (pronoun) clues and (2) you will be able to identify the correct referent of given pronouns in nine (9) out of ten (10) sentences.

STRATEGY

Another important context clue is the use of pronouns. Pronouns are words which replace nouns (persons or things). The noun is sometimes called the referent, the word to which the pronoun refers. Very often the referent is in a sentence before. Again, you will need to search the context. (For more explanation of referents, see IRS booklet A-13.)

A. Identify what "they" refers to in each of the following sentences:

(1) Many more people now live near the Delaware River. They have built many cities and factories.

"They" refers to: _____

(2) The sewage and the chemicals have changed the water. They have polluted it.

"They"refers to: _____

(3) "A high crown dolly is also used in conjunction with bumping hammers. It is required for use whenever a high crown radius is encountered. . ."

"It" refers to: _____

B. Be careful to specify the correct referent when you are deciding which noun the pronoun is replacing. What does the word "them" refer to in the following sentence?

The loose holding of dollies and hammers permits them to bounce back naturally.

_____ a. dollies

_____ b. hammers

_____ c. dollies and hammers

_____ d. holdings

Yes, the word them refers to both the dollies and hammers.

C. When pronouns replace nouns, the referent must be clear. What is the referent in sentence (1) below for the pronoun "it" in sentence (2)?

(1) The tractor protection equipment should not be used as a parking brake.

(2) It is not designed for that purpose.

"It" refers to:

_____ a. the parking brake

_____ b. the tractor

_____ c. the tractor protection equipment

You are correct if you checked the last item, c, "the tractor protection equipment".

D. Indicate the correct referent (object) that the underlined pronoun stands for in each of the following passages:

(1) When one wheel gives repeated trouble, do not keep on pulling that wheel to find the trouble--look at the other three.

"that wheel" refers to: _____

(2) This excessive and unnecessary air waste places an additional load on the compressor, unloader mechanism and governor. It increases compressor wear and pulls more water into the storage reservoirs.

"It" refers to: _____

(3) One final word on brake performance is not maintenance, but it is important because even good maintenance cannot produce good brake performance if it is ignored. Air brakes are sized and powered in accordance with the rated axle loads.

"it" refers to: _____

(4) The next step would be to connect test gauges into the rear and trailer brake chambers. Use fairly long hoses so they can be held up side by side.

"they" refers to: _____

(5) A second point in the mechanical factors is the design torques applied to the brakes. These are established by the vehicle manufacturer and they are basically determined by the designed weight on the axles.

"These" refers to: _____

(6) From a maintenance standpoint, you should be interested in how to preserve this air speed performance. This refers to only this first pneumatic factor and how to keep it to new vehicle standards.

"This" refers to: _____

"it" refers to: _____

Check your answers with the answer key. If you missed more than one, see your instructor. Otherwise, go on to Objective 5.

OBJECTIVE 5

You will be able to name two (2) limitations of using context clues in determining word meaning.

STRATEGY

You have learned that the context often gives hints of the meanings of words. However, it is also important to realize that:

(1) the context sometimes has nothing at all to reveal about a word's meaning, and

(2) the context may mislead you about the word's meaning.

A. What does the context of the following sentences lead you to conclude about the underlined words? Is your conclusion correct in each case?

(1) "Corbett had lived in this noisome slum for only two weeks, but he would never forget the screaming voices, the angry quarreling, and the fighting that made slum life so unbearable."

Your intelligent guess at the meaning of noisome:

_____

(2) "He was livid with rage."

Your intelligent guess at the meaning of livid:

_____

In these examples the context is a real fooler!

In sentence (1), both the context of the word noisome and also its structure suggest the meaning noisy. Upon using a dictionary, however, you will find the meanings offensive, distasteful, disgusting, ill-smelling. The word noisome comes from the same root word as annoy and is in no way related to noise.

In sentence (2), did you think livid meant red or flushed? It is a logical "guess" since you have probably seen people turn red with anger. However, the dictionary gives the meanings lead color, ashen, pallid, and ghastly.

B. What help can you get from the context in these sentences?

"The women had an in-depth discussion of philately that lasted well into the night. Their interest in the subject was so keen that they were unaware of the passage of time."

This is an example of a context which provides no clues to the meaning of the word. You must either already know the meaning of philately and then make some sense of it in the context, or you must turn to an outside source-- a teacher, a knowledgeable friend, or a dictionary.

C. SELF POST-TEST

Without looking back, name two limitations of using context clues.

1. _____

2. _____

Check your answers under Objective 5. If you missed either one, reread the examples under Objective 5 and see your instructor for further explanation if you have questions.

C. As one teacher has wisely stated,

"CONTEXT IS A MAGNIFICENT HELP--BUT BEWARE!"

Here is a chart of guidelines for using context clues. You will probably arrive at some of your own as you read and use this technique.

DO'S AND DON'TS FOR USING CONTEXT
Do rely on context clues: 1. When you have a definite "unmissable clue"--a definition or direct explanation in the same paragraph. 2. When you have "highly reliable clues"--key words as explained in Objectives 2-3. 3. When you only need a general idea of what the word means.
Don't rely on context clues: 1. When you need an exact, definite meaning. (Context clues only give a general idea of the meaning of a word. 2. When you don't know the meanings of the words nearby. 3. For technical words--key vocabulary which you are expected to know in your program or occupation. 4. When the word is a very important one--a key to the meaning of the whole sentence or paragraph. 5. When you have come across the word many times; if it is common in the materials you're reading, you'll want to learn its meaning completely for future reading.

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ANSWER KEY
CLUES TO WORD MEANING
AUTO REPAIR

Obj. 1

stick - adhere

1. set - to place, a group, gel, a group of tennis games
2. book - a volume to read, make reservations, 20 matches in a container
3. pot - container to cook food, container for plants, slang for marijuana
4. spring - a season, a metal coil, a source of water
5. bear - an animal, put up with

a. get better / final dry stage of paint
b. a machine to dry clothes / an addative to paint to speed curing and drying
c. rim for a picture / metal foundation or structure that supports suspension components of the auto
d. time for celebration / a void or hole in a coating film
e. women's clothing / usually flat fender lower side panal
f. women's protective clothing / designates a deflector panal as a fender or bumper deflector panal
g. blood flowing out of a body / old color coming through to cover a top coat
h. end / a pro texture coating or paint
i. type of chair / verticle backrest of an auto seat
j. a child's plaything / a hand held anvil

1. f
2. i
3. g
4. h
5. b
6. d
7. e
8. c
9. a

Obj. 2

b. league / summer
d. Hall of Fame in Cooperstown
e. baseball
a. dark
b. rose
c. put out

a. 2
b. 1
c. 3
d. out of date
e. made less

f. into
g. change
h. danger
i. speed
j. at the same time

Obj. 3

1. is one / system where brake linings contact drums on all wheels at once
2. are gases / welding with gases
3. is a device / to direct air flow
4. are used to / parts that utilize air energy
5. a type of / misalignment
6. is / portable tool
7. is called / passenger carrying compartment
8. can be likened / outer surfaces of an auto
9. or / net force
10. which is / decimal system of weights and measures

Obj. 4

A. 1. people
2. sewage and chemicals
3. high crown dolly

B. a. them
b. them
c. them
d. them

C. C

D. 1. one wheel
2. unnecessary air
3. maintenance
4. hoses
5. torgues
6. -air speed performance
-air speed performance

Obj. 5

1. context may not reveal a word's meaning
2. context may mislead you about a word's meaning

PERSONAL ACHIEVEMENT

READING

Auto Repair

Learning Word Parts

PRE/POST TEST
LEARNING WORD PARTS

Obj. 1 for Auto Body Packet

Obj. 4 for Business Packet

Obj. 5 for Environmental Studies Packet

Obj. 6 for Data Processing, Ag, and Health Packets

Write the root word in each of the following words.
80% correct = mastery

1. factually
2. automatically
3. carelessness
4. suitable
5. immaturity
6. endurable
7. concurrent
8. acidity
9. inequality
10. evaporation

ANSWER KEY

1. fact
2. auto
3. care
4. suit
5. mature
6. endure
7. current
8. acid
9. equal
10. vapor

PRE/POST TEST
LEARNING WORD PARTS

Obj. 1

Obj. 2 for Auto Body Packet

Match the following prefixes with their meaning.
80% correct = mastery.

1.	____ bi-	a.	many
2.	____ demi-, hemi-, semi-	b.	thousand
3.	____ kilo-	c.	one
4.	____ milli-	d.	single
5.	____ mono-	e.	much, many
6.	____ multi-	f.	half
7.	____ poly-	g.	hundred
8.	____ centi-	h.	four
9.	____ quadri-	i.	thousand, a thousandth
10.	____ uni-	j.	two

Obj 2

Obj. 3 for Auto Body Packet

Obj. 2 and Obj. 3 combined for Data Processing, Ag., and Health Packets

Match the following prefixes with their meanings
80% correct = mastery.

1.	____ anti-, contra-	a.	wrong
2.	____ trans-	b.	under
3.	____ in-	c.	before
4.	____ auto	d.	against
5.	____ micro	e.	self
6.	____ inter-	f.	between
7.	____ mis-	g.	not, into
8.	____ post-	h.	across
9.	____ pre-	i.	small
10.	____ sub-	j.	after

ANSWER KEY

Obj. 1 or 2

1. j	6. a
2. f	7. e
3. b	8. g
4. i	9. h
5. d	10. c

Obj. 2 or 3

1. d	6. f
2. h	7. a
3. g	8. j
4. e	9. c
5. i	10. b

Obj. 4 for Auto Repair Packet

Write the meaning of the following prefixes.
100% correct = mastery.

kilo - _____ deci - _____

hecto - _____ cent - _____

deca - _____ milli - _____

Obj. 4 for Environmental Studies Packet

Obj. 5 for Data Processing, Ag., and Health Packets

Write the meaning of the following prefixes.
80% correct = mastery.

-scope

-ology

-able

-ize, ate

-phobia

ANSWER KEY

Obj. 4 Auto Body

thousand	one tenth
hundred	hundred, hundredth
ten	one thousandth

Obj. 4 & 5

instrument for visual examination

study of

capable of

to subject to, to make

fear of

Obj. 5 for Auto Repair Packets

A. Circle the suffix(es) in each word listed below.
80% correct = mastery.

1. Automotive
2. Unhelpful
3. Portable
4. Liquidity
5. Carburation
6. Painter
7. Smoothly
8. Strenuous
9. Specialist
10. Unitize

ANSWER KEY

Obj. 5 Auto Repair

1. -tive
2. -ful
3. -able
4. -ity
5. -tion
6. -er
7. -ly
8. -ous
9. -ist
10. -ize

PRE/POST TEST
LEARNING WORD PARTS

Obj. 5 for Business Packet

Obj. 6 for Auto Repair and Environmental Packets

Obj. 7 for Data Processing, Ag., and Health Packets

A. Draw a line between the words that make up the compound word.

B. Then match the compound word to its definition.
80% correct = mastery.

1. ____ bookmark
2. ____ wholesale
3. ____ hardtop
4. ____ windshield
5. ____ pipeline
6. ____ groundwater
7. ____ input
8. ____ feedback
9. ____ feedlot
10. ____ eyestrain

a. glass in front of a vehicle to protect passengers from the wind.

b. the feeding back of part of the output of a machine to the computer.

c. selling of goods in large quantities.

d. pipes joined to provide a duct through which fluids flow.

e. fatigue of eyeball muscles.

f. area where cattle are kept and fattened for market.

g. an auto with a fixed hard top.

h. information to be put into a computer.

i. something put between pages to make it easy to find the place.

j. water below the watertable.

ANSWER KEY

1.	i	6.	j
2.	c	7.	h
3.	g	8.	b
4.	a	9.	f
5.	d	10.	e

1.	book/mark	6.	ground/water
2.	whole/sale	7.	in/put
3.	hard/top	8.	feed/back
4.	wind/shield	9.	feed/lot
5.	pipe/line	10.	eye/strain

LEARNING WORD PARTS: AUTO REPAIR

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LEARNING WORD PARTS

A word like decimeter may at first glance seem frustrating and even impossible. But long words such as decimeter can sometimes be broken down into word parts (deci---meter)which make them easier to understand and read. Often these long words are nothing more than short words with prefixes and suffixes added on. If you are familiar with the prefix deci- (one tenth) you will already have an idea of what the longer word, decimeter, means. Once you learn what the root word "meter" means, you will have a clearer idea of the meaning of the whole word. Each of the word parts provides a clue to the meaning of decimeter.

In this unit you will learn to identify different parts of words, then the meanings of some of the most commonly used word parts in the Auto Repair area. When you know how to do this you will be able to unlock the meanings of many unfamiliar words as you read.

OBJECTIVE 1

You will be able to identify the root words in nine (9) out of ten (10) given words.

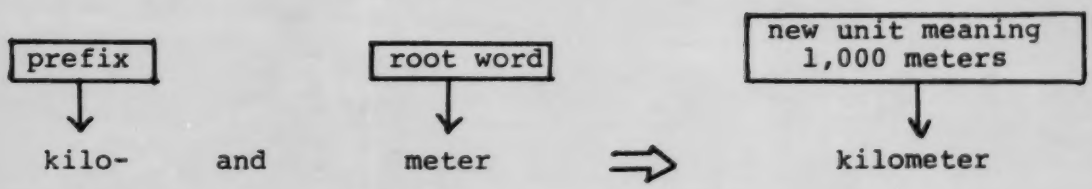
Definition

Root word = 1) the part of a word that carries the main load of the meaning.

2) the base of a word to which other parts - prefixes and suffixes - are added.

STRATEGY: Part I

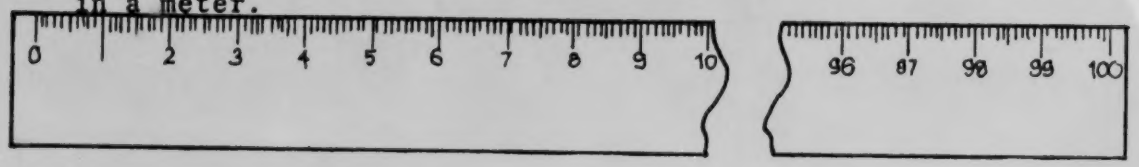
We use root words along with prefixes to name units of measure in the metric system.



Here are some root words used in the metric system:

ROOT WORDS		
meter (m)	_____	length
liter (l)	_____	liquid measure
gram (g)	_____	weight

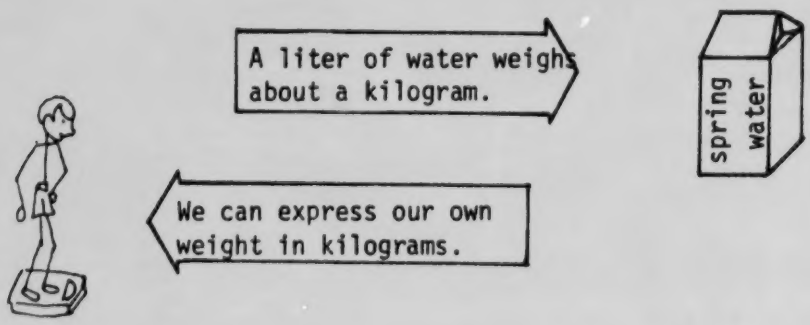
a. The meter is a unit of length.* There are 100 centimeters in a meter.



*A meter also sometimes means a guage or instrument such as pyrometer, odometer, and tachometer.

b. The gram (g) is one unit of weight in the metric system. It is a very small unit.

We use the kilogram (kg) most often in our everyday lives.

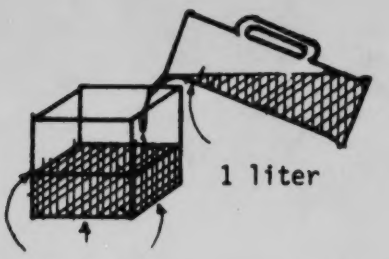


1-6. Complete. Think of prefixes.

★	1 kilogram	⇔	? grams
	1 hectogram	⇔	? grams
	1 dekagram	⇔	? grams
★	_____ gram		
	1 decigram	⇔	? grams
	1 centigram	⇔	? grams
	1 milligram	⇔	? grams

★ most important

c. Liquid Measure _____



A cube-shaped container measuring 1 decimeter on each side will hold 1 liter (ℓ) of liquid.

1-6. Complete. Think of the prefixes.

	1 kiloliter	⬭	? liters
	1 hectoliter	⬭	? liters
	1 dekaliter	⬭	? liters
★		liter	
	1 deciliter	⬭	? liter
	1 centiliter	⬭	? liter
★	1 milliliter	⬭	? liter

★ most important

STRATEGY: PART II

Many times words seem impossible or unreadable simply because they are long. For example, look at the word just used:

unreadable

Can you see a word within that word? Once you identify the root word (read), the puzzle of this "new" word is practically solved.

Complete the following activities to help you learn to identify root words. Then, look for familiar root words in long words you come across in your reading.

1. Write only the root words in each of the following words.

EXAMPLE: unreadable

(Prefix)		Root Word		(Suffix)
un	/	read	/	able

(HINT: There might not be both a prefix and suffix in a word.)

a. plasticity _____

b. vaporization _____

c. reactivate _____

d. elasticity _____

e. atomization _____

2. Look at the underlined root word in each practice below. Three of the four words under it are related in meaning because they are formed from this root word. Check these words. The first group is done for you.

a. sing a tune

__X__ singer
__X__ singable
__X__ singing
____ using

b. steam heat

____ unheated
____ cheat
____ reheat
____ heater

c. woman or man

____ manliness
____ manly
____ almanac
____ mannish

d. able to operate

____ disable
____ table
____ ably
____ unable

e. health care

____ careful
____ careless
____ scare
____ caring

f. years of age

____ ageless
____ aged
____ manage
____ aging

g. snow and ice

____ deice
____ icy
____ icicle
____ notice

h. sad story

____ sadden
____ sadly
____ sadness
____ saddle

i. kind person

____ unkind
____ kindest
____ kindly
____ kindle

j. talk quietly

____ talkative
____ stalk
____ talker
____ talking

k. hear a noise

____ unheard
____ heart
____ hearing
____ hearers

As you can see, when looking for small words within longer words, you need to:

1. look for the root word, not just a certain group of letters, and
2. remember that sometimes the spelling of the root word is changed before a suffix is added. (Example: In Practice C man is the root word, but with a suffix the n is doubled mannish.)

SELF POST-TEST

Underline the root word in each of the following words:

1. kilometer
2. chalking
3. straightening
4. duraluminum
5. plunger
6. deciliter
7. hectogram
8. evaporation
9. lubrication
10. durability

When you have completed this test see your instructor. If you got nine (9) or more correct, you are ready to go on to the next objective.

You will learn the meanings of several root words in your program. When you have learned to recognize word parts and the meanings of some of them, you can determine the meaning of many unfamiliar words.

OBJECTIVE 2

You will be able to identify and give the meanings of at least 10 of the following prefixes:

PREFIX	MEANING
bi-	double, twice, two
centi-	hundred, a hundredth
demi, hemi, semi-	half
equi-	equal
kilo-	thousand
milli-	thousand, a thousandth
mono-	single
multi-	many
poly-	much, many
quadri-	four
tri-	three
uni-	one

STRATEGY

Read the following definition and example carefully. A prefix is a syllable (a part of a word) added to the beginning of a word which changes or alters the meaning of the word.

EXAMPLE:	Prefix		Word or Root		
	poly	+	graph	=	polygraph
	hemi	+	sphere	=	hemisphere

Now that you have an idea of how prefixes work, do the following practices. You may look back at the first paragraphs for meanings, but try to fill in the blanks you know first.

1. Fill in the missing words.

Tricycle

A vehicle with _____ wheels.

Tri- means _____.

Bicycle

A vehicle with _____ wheels.

Bi- means _____.

_____ cycle

A vehicle with one wheel.

_____ means _____.

2. A triangle has three sides. How many sides does a quadrangle have? _____

How many feet do the quadrupeds--dogs, cattle, elephants, etc.--have? _____

The prefixes quad-, quadri-, and quadru- mean:

_____

3.

cup of coffee

demitasse of coffee

sphere

hemisphere

circle

semi-circle

Demi-, hemi- and semi- mean _____

4. The base word meter is a length of measure somewhat longer than a yard.

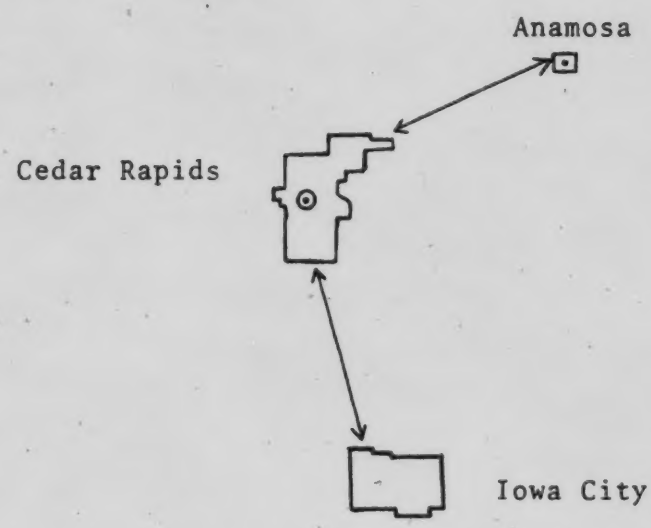
Centimeter is a word made up of a prefix (centi-) and the base word meter. Look back at the list of prefixes and their definitions (under Objective 1) to find out what centi- means.

A centimeter is a _____ of a meter.

centi- means _____

5. Anamosa and Iowa City are of equal distance from Cedar Rapids. In other words, Anamosa and Iowa City are _____ distant from Cedar Rapids.

The al in equal is dropped and replaced by _____ in the prefix equi-.



6. Polygamy is illegal in the United States; only monogamy is legal. That is, one person's being married to two or more (many) people at one time is illegal; one person may be legally married to only one person at a time.

A polygraph, often called a "lie detector" measures the changes in several (many) of the body's processes at the same time.

A polyglot speaks several (many) languages.

Comedians who work alone (one person speaking) give monologues.

A person who speaks in a single (one) tone is said to use a monotone.

poly- means _____

mono- means _____

7. The prefix multi- has a similar meaning to poly-.

multi-colored = something that has many colors

multimillionaire = someone who has millions of dollars

8. Match the meanings in Column 2 to the prefixes in Column 1.

COLUMN 1	COLUMN 2
_____ mono-	a. double, twice, two
_____ bi-	b. hundred, hundredth
_____ uni-	c. half
_____ centi-	d. equal
_____ tri-	e. thousand
_____ milli-	f. thousand, thousandth
_____ multi-	g. single, one
_____ demi, hemi-, semi-	h. many
_____ quad-	i. much, many
_____ equi-	j. four
_____ poly-	k. three
_____ kilo-	l. one

SELF POST-TEST

Cover your work for all previous strategies; write the meaning of each of the following prefixes:

uni-

mono-

bi-

tri-

quadri-

demi-, hemi-, semi-

centi-

milli-

kilo-

poly-

equi-

Did you get 9 or more of the above meanings correct? Good! If you missed more than 2, see your instructor for other activities to learn these prefixes.

OBJECTIVE 3: More Common Prefixes

You will be able to identify the prefixes and their correct meanings in at least nine (9) out of ten (10) given words.

PREFIX	MEANING
re-	1) again, as in *repaint* 2) back, as in *repay*
un-	1) not, as in *unkind* 2) opposite of, as in *unfold*
fore-	1) before, as in *foresee* 2) front part, as in *foredeck*
mis-	1) wrong, as in *mismatch*
pre-	1) before, earlier, as in *prepay*
in-	1) not, as in *inhuman* 2) into, as in *inject*

STRATEGY

These prefixes are often used in Auto Repair work.

CAUTION: These letters at the beginning of a word are not always prefixes. They are sometimes a part of the base word as in the word *receive* (re is not a prefix here). You should always examine a word carefully and decide:

1) is there a prefix?
2) what does that prefix mean?

(Notice that most of the prefixes given have two possible meanings.)

Most importantly, you should look at the sentence the word is used in to see if the definition you have determined "fits".

1. Read pages 3-4 in IRS Booklet A-21 (red).

2. im-, in-

This prefix, like many of the others, has two meanings. Write those meanings on the lines below. Then, write the correct meanings in the sentences.

im-, in- = 1) _____

2) _____

An inoperative vehicle is _____ operative.

The injection system delivers the correct quantity of fuel _____ the combustion chamber.

Improper featheredging usually occurs because the material has _____ had an opportunity to cure thoroughly.

SELF POST TEST

From what you have learned in the above practices, you should now be able to match the following prefixes and their meanings. You will need to use some of the prefixes more than once.

_____	wrong	A.	re
_____	not	B.	un
_____	again	C.	pre
_____	not	D.	mis
_____	before, earlier	E.	in
_____	opposite of	F.	fore
_____	front part		
_____	back		
_____	before		
_____	into		

If you got nine (9) or more correct, go on to the next objective. If you missed more than one, see your instructor.

OBJECTIVE 4

You will be able to identify the meanings of the following prefixes:

kilo-	deci-
hecto-	centi-
deka-	milli-

STRATEGY

These prefixes also frequently occur in Auto Repair work. They are all metric prefixes, and basically describe units of measure in the metric system.

You've already learned one of these prefixes, centi-, in Objective 1.

Write it's definition here: _____ or _____.

Yes, centi- means hundred or hundredth, depending upon the word and the sentence.

Here are the meanings of the other metric prefixes:

kilo- means 1,000 (thousand)
hecto- means 100 (hundred)
deka- (also sometimes spelled deca) means 10 (ten)

deci- means 1/10 (one tenth)
milli- means 1/1000 (one thousandth)

1. The word meter is a metric term which is a length of measure somewhat longer than a yard. By adding a metric prefix to meter, you get variations of a meter.

   Complete the chart. Think of the prefixes.

   1 kilometer ⟷ _____ meters
   1 hectometer ⟷ _____ meters
   1 dekameter ⟷ _____ meters

   1 decimeter ⟷ _____ meter
   1 centimeter ⟷ _____ meter
   1 millimeter ⟷ _____ meter

2. These prefixes have the same meanings when used in other words. Fill in the blanks. Use the prefixes to figure out the correct meanings.

   a. A decathlon race has _____ events.

   b. A millidegree is _____ of a degree.

   c. A kilocycle is _____ cycles per second.

   d. A centipede is an insect with _____ legs.

SELF POST TEST

Fill in the correct prefixes.

1	_____ liter	=	1,000 liters
1	_____ liter	=	1/1,000 liter
1	_____ liter	=	100 liters
1	_____ liter	=	1/100 liter
1	_____ liter	=	10 liters
1	_____ liter	=	1/10 liter

How did you do? If you got all six (6) correct, go on to the next objective. If you missed any, go back to the strategy and practices to review. Then see your instructor.

Objective 5

You will be able to identify the suffixes in nine (9) out of ten (10) given words.

Strategy

A suffix is a group of letters that can be added to the end of a word. It gives the word a new meaning.

Read this list of suffixes and their meanings.

ful - full of
able - able to, fit for
less - without
es, s - action, more than one

d, ed - shows action in the past
ly, y - how someone or something feels, acts, looks

ion, tion, ation - action, process
r, er, or, ist - tells who someone is, what something is
ous - tells what something is like
ity - the quality or degree of something

I. Read each sentence below. In each sentence a word needs a suffix. In numbers 1 - 5, three suffixes are listed. Choose the one that will give the word and the sentence the right meaning. In numbers 6 - 10, choose from the whole list of suffixes written above.

less, ion, ful 1. Newer cars require less frequent lubricat_____.

ly, ous, er 2. When you do a good job of making a custom_____'s car sparkle, you're making a good friend for your dealership.

ing, able, ful 3. Maintain_____ cars and trucks is essential today.

less, ing, ful 4. He couldn't find work. He was job_____.

ous, ity, ing 5. In auto repair language, viscos_____ is the degree of thickness of a liquid.

6. Removing rusted nuts from a tire can be a strenu_____ job.

7. The length of life of a paint film is referred to as durabil_____.

8. In other words, the paint is dur_____.

9. When she smiled, she seemed very friend_____.

10. He remove_____ the rust with a file.

II. A word may have more than one suffix (one added on to another) which makes the word look long and difficult. To "attack" this kind of word, follow these steps:

1. Look for and break off the suffixes.

2. Decide the meaning of the root word.

3. Decide the meaning of the suffix (es).

4. Check the sentence to be sure your description "fits".

Follow these four (4) steps in deciding the meaning of the following words. You may use the list on page 12 to help you.

Example: a. hopelessly: He was hopelessly in love with his best friend's girlfriend.

(1) Suffix (es): -less; -ly

Meaning: without; how someone feels

(2) Root Word: hope

Meaning: expectation of something good.

(3) What does hopelessly mean?

-less means without and -ly in this case means how someone feels. Thus, hopelessly describes the way he loved her--without hope.

(4) Test this definition out in the sentence to see if it makes sense.

b. elasticity: Elasticity enables an adhesive to recover its original shape.

(1) Suffix (es): _____

Meaning: _____

(2) Root Word: _____

Meaning: _____

(3) What does elasticity mean?

_____

_____

_____.

(4) Does this definition make sense in the sentence above?

Yes_____ No_____

c. collisions: He was involved in so many collisions that his license was taken away.

(1) Suffix (es): _____

Meaning: _____

(2) Root Word: _____

Meaning: _____

(3) What does collisions mean?

_____

_____

_____.

(4) Does this definition make sense in the sentence above?

Yes_____ No _____

SELF POST TEST

Directions:

Without looking back at any of the practices, underline the suffixes of each of the following words. Remember, some words have more than one suffix.

1. carefully
2. plasticity
3. plasticizer
4. operable
5. brake specialist
6. injection
7. courageous
8. endurable
9. managerless
10. unitized

Did you get nine (9) out of ten (10) correct? Good! Now go on to the next objective.

If you missed more than one, see your instructor.

OBJECTIVE 6

(1) You will be able to recognize known word parts in compound words and (2) you will be able to use the known word parts to determine the meaning of the compound words.

STRATEGY

Sometimes words are made up of two or more parts that are words which make sense by themselves. We call these compound words.

Read pages 2 and 3 in IRS booklet B-2 (Green) for an explanation of compound words. Do the exercises on those two pages in your head. Please do not write in the booklet.

SELF POST-TEST

A. Copy the compound words in the first column onto a piece of paper. Then, draw a line between the two words that make up the compound.

B. Use the meanings of the two short words in each compound to help you find the correct definition for the compound in Column 2. Write the letter of the definition on your paper next to the compound. An example has been done.

COLUMN 1			COLUMN 2
C		over/load	a. sold or on sale at a reduced price
___	1.	camshaft	b. an auto with a fixed hard top
___	2.	horsepower	c. to put too large a load in or on something
___	3.	cut-rate	d. glass in the front of a vehicle to protect passengers from the wind
___	4.	windshield	e. valves seated in cylinder head and opening downward into combustion chamber
___	5.	self-made	f. a lamp mounted on the front of a vehicle
___	6.	valves-in-head	g. shaft which cam is a part of or is attached to
___	7.	headlight	h. the selling of goods in relatively large quantities
___	8.	crankcase	i. a U.S. Customary System unit of power
___	9.	hardtop	j. love of self
___	10.	wholesale	k. successful through one's own effort
			l. the portion of the engine that encloses the crankshaft

Check your answers. If you missed more than one, see your instructor. Otherwise, you are ready to take the teacher post-tests.

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2. Deighton, Lee; Developing Vocabulary in the Classroom.

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4. Basic Reading Skills for Junior High School Use. Scott Foresman, and Company.

Obj. 1

Part II

a. plastic
b. vapor
c. act
d. elastic
e. atom

b. unheated
reheat
heater

c. manliness
manly
mannish

d. disable
ably
unable

e. careful
careless
caring

f. ageless
aged
aging

g. deice
icy
icicle

h. sadder
sadly
sadness

i. unkind
kindest
kindly

j. talkative
talker
talking

k. unheard
hearing
hearers

Self Post-Test

1. meter
2. chalk
3. straight
4. aluminum
5. plunge
6. liter
7. gram
8. vapor
9. lubricate
10. endure

Obj. 2

1. 3, three
2, two
uni
uni, one
2. four, four, four
3. half
4. hundred, hundredth
5. equi, i
6. many, one

8. 1 a
g
b
k
f
i
c
j
d
h
e

Self Post-Test

one
one, single
two, twice
three
four
half
hundred, hundredth
thousandth
thousand
many
equal

Obj. 3

2. not, in or into
not
into
not

Self Post-Test

D B
B F
A A
E C or F
C E

Obj. 4

hundred, hundredth
2. 10
1/1000
1000
100

Self Post-Test

kiloliter centiliter
milliliter dekaliter
hectoliter deciliter

Obj. 5

1. ion
2. er
3. ing
4. less
5. ity
6. ous
7. ity
8. able
9. ly
10. ed

b. 1. ity, quality or degree of
2. elastic
flexible
3. the quality of flexibility
4. yes

c. 1. sion, s
2. noun form, plural
3. collide, crash together
the coming or crashing together
4. yes

Self Post-Test

1. ful, ly
2. ity
3. ize, er
4. able
5. ist
6. tion
7. ous
8. able
9. er, less
10. ize, ed

Obj. 6

G 1. cam/shaft
I 2. horse/power
A 3. cut/rate
D 4. wind/shield
K 5. self/made
E 6. valves/in-head
F 7. head/light
L 8. crank/case
B 9. hard/top
H 10. whole/sale

PERSONAL ACHIEVEMENT

READING

Auto Repair

Finding Exact Meanings

FINDING OUT EXACT MEANINGS: AUTO REPAIR

		Page
OBJECTIVE 1:	(1) Locate the appropriate section in the dictionary in which a word is found and (2) arrange given words in alphabetical order.	2
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FINDING OUT EXACT MEANINGS (Using Glossaries and Dictionaries)

As you read, you will come across words for which your skills in examining word parts and/or using the context are not enough when you need to know the exact meaning of a word. The purpose of this unit is to help you become aware of different sources for looking up new words and to help you learn how to use those sources.

Contrary to ideas you may have formed in grade school, a dictionary is not just a tool for boring drills and "copy-work". Instead, the dictionary is the most reliable source you can turn to if you want to learn or confirm your hunches about the meaning of a word. In addition to pronunciations and definitions, many dictionaries give information about the history of a word, synonyms (other words that mean the same thing), and antonyms (words opposite in meaning). Sample phrases and sentences also make the meanings of words clearer. All of these features help you better understand new or unfamiliar words.

When you learn how to take advantage of the many features of a dictionary and use it frequently, you strengthen your power to keep your vocabulary growing for life.

OBJECTIVE 1

1. You will be able to quickly locate the appropriate section of the dictionary in which a word is found.
2. You will be able to arrange given words in alphabetical order.

STRATEGY

1. Read IRS Booklet A-23, "Locating Words in a Dictionary", p. 2-3 only.
2. Place these words in alphabetical order on the basis of their first letters:
   velocity, cylinder, horsepower, gears, lubrication, wheel

   (1)_____ (4) _____

   (2) _____ (5) _____

   (3) _____ (6) _____

3. Place these pairs of words in alphabetical order:
   (1) inject - intake _____ _____

   (2) manometer - malleable _____ _____

   (3) cratering - cracking _____ _____

   (4) electrolyte - electrode _____ _____

Check your answers with the answer key. If you missed any of these pairs or any item in practice 2, see your instructor.

4. Where would you look in the dictionary for these words? Put an X for each word on the line under the correct heading, front (A-H), middle (I-R), or back (S-Z).

		FRONT	MIDDLE	BACK
a)	piston	_____	_____	_____
b)	cylinder	_____	_____	_____
c)	axle	_____	_____	_____
d)	enamel	_____	_____	_____
e)	sealer	_____	_____	_____
f)	vehicle	_____	_____	_____
g)	crankshaft	_____	_____	_____
h)	gasket	_____	_____	_____
i)	tachometer	_____	_____	_____
j)	radiator	_____	_____	_____
k)	flywheel	_____	_____	_____
l)	horsepower	_____	_____	_____
m)	pawl	_____	_____	_____
n)	muffler	_____	_____	_____
0)	viscosity	_____	_____	_____

Check your answers with the key. Did you get all of them correct?

Great! If you missed more than one see your instructor.

OBJECTIVE 2: Using Guide Words

You will be able to locate words in a dictionary by using guide words and alphabetical order.

STRATEGY

Read IRS Booklet A-23, "Locating Words In a Dictionary", p. 5-6.

PRACTICE 1: Locating Words In a Dictionary

In each box below, put an X before each word that you would expect to find on a dictionary page that has the guide words shown at the top of the box.

cycle	dowel
_____ cylinder	_____ deceleration
_____ dynamometer	_____ combustion chamber
_____ centrifugal	_____ decalomania
_____ dead center	_____ circumference
_____ drier	_____ chipping

efficiency	flywheel
_____ electrode	_____ eccentric
_____ foot-pound	_____ flash point
_____ exhaust manifold	_____ Farenheit
_____ four-stroke cycle	_____ fanning
_____ electrolyte	_____ force dry

lobe	muffler
____ lubrication	____ mean effective pressure
____ lacquer	____ LUCITE
____ main bearing	____ liquid
____ malleable	____ masking
____ manometer	____ metallics

radiator	stroboscope
____ rheostat	____ stellite
____ retarder	____ silicone
____ supercharger	____ solvent
____ symmetrical	____ ring groove
____ rebore	____ spur gear

OBJECTIVE 3

You will be able to skim a dictionary entry and identify different parts of the entry in 8 out of 10 examples.

STRATEGY

Each word listed in a dictionary has a variety of information that goes with it. The word and all its information is called AN ENTRY.

Learn the different parts of a dictionary entry.

A	B	C	D
re·tain	(ri-tān')	*v.*	[ME < OF < L *re-back + tenere* to hold]

E 1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in [to retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

A. The first thing to appear in a dictionary entry is the word itself in its correct spelling, and after divided into syllables. Re·tain is shown in two syllables.

B. The second thing listed in a dictionary entry is the pronunciation of the word. This part of the entry, when used with the pronunciation key (which you will study more closely in the next objective) will tell you how to pronounce the word. It will give you not only the sound of the letters, but the number of syllables in the word and which syllable(s) is/are accented.

C. The third part of the entry indicates part of speech. If a word may be more than one part of speech (such as run--*verb* - Run to the store. and run--*noun* - I got a run in my hose.), both symbols will be given (*v.* verb and *n.* noun). Other parts of speech are as follows on the next page.

adj. - adjective

adv. - adverb

prep. - preposition

conj. - conjunction

art. - article

pron. - pronoun

A B C D
re·tain (ri-tān') *v.* [ME < OF < L *re-back + tenere* to hold]

1: to hold on, keep in possession 2: to keep in a fixed state or condition 3: to continue to have or hold in [to E retain heat] 4: to continue to practice or use 5: to keep in mind 6: to hire or arrange in advance for the services of

D. The next part of the entry is the origin of the word, or where the word came from. In the example above you see ME < OF < L. This means the word came to us from Middle English, and before that the word was Old French, and before that it had a Latin base. The explanation of these abbreviations is in the front of the dictionary.

C and D are reversed in some dictionaries.

E. The last part of a dictionary entry is the actual meaning of the word. Often a word will have more than one meaning, and these will be listed in the order they are most frequently used. In other words, the first meaning listed would be a much more common use of the word than the tenth meaning listed.

NOTE: When you use a dictionary, you usually don't need to know all the information given in an entry. By knowing which part of the entry contains the information you need, and by looking directly at that part of the entry, you can save yourself a great deal of time and confusion.

EXERCISE

Below are 5 dictionary entries. On your paper, answer the questions asked about each entry.

1. sa·voy (s ə voi') n. [Fr. *cabbage of* Savoy] a kind of cabbage with crinkled leaves and a compact head

   Copy the pronunciation: _____

2. scraw·ny (skrô' nē) adj. [Scand.] 1: very thin; skinny and bony 2: stunted or scrubby

   Copy the part of speech: _____

   What does that stand for? _____

3. skein (skan) n. [ME *skeyn* < MFr.] 1: a) a quantity of thread or yarn wound in a coil b) something like this, as a coil of hair 2: a flock of wild fowl

   Copy the origin of the word: _____

   How many syllables does the word have: _____

4. stel·lar (stel' ə r) adj. [LL *stellaris* < L. *stella*] a star 1: of the stars or a star 2: like a star, as in shape 3: by or as by a star performer; excellent, outstanding 4: leading; chief a *stellar* role

   What is the second meaning of the word? _____

   Copy the pronunciation of the word: _____

5. ten·et (ten' it) n. [L., *he holds* < *tenere*] a principle, doctrine, or belief held as a truth, as by some group

   How many syllables does the word have? _____

   What part of speech is it? _____

   What does the word mean? _____

SELF POST-TEST

For the following ten questions write on your paper which part of the entry is underlined.

1. Kob (käb) n. [< native name in Niger-Congo area, as in *Wolof Koba*] an orange-red antelope of SE Africa

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

2. in·sure (in shoor') v. [ME. *ensuren*] 1: to contract to be paid or to pay money in the case of loss of (life, property, etc.); take out or issue insurance on (something or someone) 2: to give or take out insurance

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

3. lei (lā) n. [Haw.] in Hawaii, a wreath of flowers and leaves, generally worn about the neck

   a. correct spelling and number of syllables (the word itself)
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

4. mome (mōm) n. [< ?] a blockhead, fool

   a. correct spelling and number of syllables (the word itself
   b. pronunciation of the word
   c. part of speech of the word
   d. origin of the word
   e. meaning of the word

5. mon·e·tize (män' ə tīz) v. [< L. *moneta* a mint + ize] 1: to coin into money 2: to legalize as money

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

6. o·men (ō' mən) n. [L. < OL. *osmen*] a thing or happening supposed to foretell a future event, either good or evil; augery

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

7. or·gan·ist (ôr' gə nist) n. [< MFr. or ML.] one who plays the organ

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

8. per·i·lune (per' ə lōōn) n. [< peri + lune] the point nearest to the moon in the elliptical orbit of a man-made satellite in orbit around it

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

9. pied (pīd) adj. [ME *pyed*, orig. black and white like a magpie] 1: covered with patches or spots of two or more colors; piebald; variegated 2: wearing a garment of this description

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

10. plex·i·form (plek' sə form) adj. [< plexus + -form] like, or in the form of, a plexus or network; complex

a. correct spelling and number of syllables (the word itself)
b. pronunciation of the word
c. part of speech of the word
d. origin of the word
e. meaning of the word

OBJECTIVE 4: Using a Dictionary for Pronunciation

You will be able to use a pronunciation key to decide the correct way to pronounce a word.

STRATEGY 1

Read IRS Booklet A-5 "Using a Dictionary for Pronunciation" pages 2-4.

PRACTICE 1

Complete Practice 1 on page 5 of IRS Booklet A-5. Check your answers with Card A-5 at the back of the IRS Box.

STRATEGY 2

Read IRS Booklet A-5 "Using a Dictionary for Pronunciation" page 6.

PRACTICE 2

Beside each word in the first column below is the special spelling to show how the word is pronounced. Use the pronunciation key at the bottom of the page to decide how to pronounce each word. If the word has one syllable, decide what other word in that line has the same vowel sound in it, and put an X in the blank before that word. If the word has two syllables, notice which syllable is stressed. What vowel sound does that syllable have? Put an X in front of the word that has the same vowel sound.

EXAMPLES:

shirr (shûr)	____ hear	____ fur	____ hire
rotor (rō' tər)	____ sun	____ no	____ hot

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ ŭ cut/ ûr turn/ y͞oo use/ ə about/ zh pleasure

1.	radiate (rād' ē āt)	___ key	___ fry	___ gray
2.	octain (ök' tān)	___ sweet	___ grape	___ suit
3.	hoist (hoist)	___ coil	___ toad	___ mouth
4.	groove (gro͞ov)	___ must	___ rude	___ roll
5.	poly (pŏl' ē)	___ fed	___ bone	___ hot
6.	bogie (bō' gē)	___ wide	___ chest	___ feet
7.	pyro (pī' rō)	___ wipe	___ wet	___ clean
8.	stroboscope (strō' bō skōp)	___ coat	___ tent	___ need
9.	chassis (chăs' ē)	___ game	___ fast	___ bend
10.	clutch (klŭtch)	___ tune	___ would	___ cup

PRONUNCIATION KEY

ă pat/ ā pay/ âr care/ ä father/ ĕ pet/ ē be/ ĭ pit/ ī pie/ îr fierce/ ŏ pot/ ō toe/ ô paw, for/ oi noise/ ou out/ o͝o took/ o͞o moon/ th thin/ th this/ ŭ cut/ ûr turn/ yo͞o use/ ə about/ zh pleasure

Did you get 8 or more correct? Good! If not, see your instructor before going on.

OBJECTIVE 5: Using a Dictionary to Get Meaning

You will be able tc choose the meaning that makes the most sense in a given sentence from several meanings stated in a dictionary entry.

STRATEGY

Read IRS Booklet A-17, "Using a Dictionary to Get Meaning", pp. 2,3, 5.

PRACTICE: Complete the practices on pp. 4, 6, and 7. Check your answers with Card A-17 at the back of the IRS box.

If you got 27 or more correct, go on to the next unit. If you missed more than three (3), see your instructor.

OBJECTIVE 6

You will be able to name three sources besides a dictionary which help you find exact meanings of words and identify the location of these sources in materials used in your vocational program.

STRATEGY

1. Read the phrases below. Each one tells about a term in the Auto Repair field that is important to know. (Numbers c and f are thrown in for good measure - See if you can figure them out.) The first letter will help you. Write the word in the blanks. You may use a dictionary.

a. to straighten the wheels on a car

A _ _ _ _ _

b. circular chamber into which piston fits

C _ _ _ _ _ _ _ _

c. What weighs many tons but falls without making a sound?

S _ _ _ _

d. unit of power equal to 550 footpounds

H _ _ _ _ _ _ _ _ _ _

e. part that moves up and down cylinder

P _ _ _ _ _ _

f. What planet do we see more often than any other planet?

E _ _ _ _ _

g. unit which contains gears

G _ _ _ _ _ _

h. operated by water

H _ _ _ _ _ _ _ _

Now look at the starred (*) spaces. They spell the answer to this question: What is the closest place to look up the meaning of a word found in a textbook?

_ _ _ _ _ _ _ _

(CLUE: A list of words and their meanings that is usually found at the back of the book.)

2. One of the first things you should check when you get a textbook for one of your classes is whether or not it has a glossary.

Use a Glossary in one of your texts or the one in Appendix A (at the end of this packet) to answer the following questions.

a. Words are listed in _____ order.

Yes, alphabetical order is correct.

b. An entry for a word usually gives ____ (number) definition(s).

c. Definitions for the words are (choose one):

(1) general
(2) specifically related to the subject you're reading about

Did you answer that there is usually one definition? Though the word may have sevrral possible definitions, the glossary usually lists only the specific meaning as related to the subject you're reading about.

3. There are other ways of using your book to find out the precise meanings of words. These ways are reviewed below.

   a. Index

      This is usually located at the very end of the book. It tells you on what page (or pages) you can find specific information the book contains. A good index lists every subject that is discussed in the book. (For further explanation of an index, see IRS booklet A-25).

   b. Footnotes and Context

      Many times the author gives the definition for a technical word* on the same page, as is being done in this sentence. Sometimes, the authors include the meanings of words within the text material. Pay attention to the style and color of the print. These clues all save you from having to interrupt your reading further by turning to the back of the book or looking the word up in the dictionary. If the word is written in dark, heavy print, it is usually very important to your understanding of the paragraph. If the definition for a word is not given on the same page, check the glossary or the index at the back of your book.

4. The rule of thumb is to look for the closest available source for looking up the meaning of a word. Place these sources in order of their closest location:

   glossary, dictionary, index, footnotes/or context

   (1) _____

   (2) _____

   (3) _____

   (4) _____

* a word related directly to a particular subject area

APPENDIX A

GLOSSARY

AEROFOIL: wing-like structure, curved on the top side, and flat on the bottom.

AXLE: metal bar on which wheels revolve.

BOGIE: under-carriage with two or more wheel pairs.

CHASSIS: basic framework of a car.

CLUTCH: mechanism used to put drive in or out of gear.

CONVERTIBLE: car whose roof can be removed to make into an open car.

CRANKSHAFT: shaped rod at bottom of engine to which pistons are connected; crankshaft rotates to create engine drive.

C.C.: short for cubic centimeters; measure used to determine size of engine. One c.c. = .06 inches.

CYLINDER: circular chamber into which pistons fit.

FLYWHEEL: heavy wheel fitted to end of crankshaft to help regulate smoothness of engine at low speeds.

GAS TURBINE ENGINE: engine with large fans that suck in and compress air, which is then mixed with fuel. When ignited, the exhaust is forced through turbines and creates propulsion.

GEARBOX: unit which contains gears.

GEARS: combination of wheels which engage with one another to alter drive speed.

HORSEPOWER (H.P.): unit of power equal to 550 footpounds, i.e. the energy required to propel 550 lbs. one foot.

INTERNAL COMBUSTION ENGINE (INT. COMB.): engine where mixture of air and fuel is compressed inside a cylinder and ignited by spark plug. Piston forces down cylinder and causes crankshaft to rotate.

PISTON: part that moves up and down cylinder.

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personal achievement

READING

Mastering Technical Vocabulary

AUTO REPAIR

Revised by Janet R. Swinton from Ellen Lamar Thomas and H. Alan Robinson, *Improving Reading in Every Class: A Sourcebook for Teachers;* copyright by Allyn and Bacon, Inc., 1972, pp. 297-304. Reprinted with permission. Some word changes have been made for easier reading

PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

List at least three (3) ways an author may alert you to important terms in your text.

1. _____

2. _____

3. _____

STRATEGY 2

List at least eight (8) things to do to learn a new technical term.

1. _____ 5. _____

2. _____ 6. _____

3. _____ 7. _____

4. _____ 8. _____

STRATEGY 3

Explain what the "divided page glossary" is, and how it may help you learn new terms.

STRATEGY 4

Explain what a "cover card" is, and how it may help you learn new terms.

STRATEGY 5

Explain how using your auditory and motor channels help you remember new terms.

STRATEGY 6

Mark the following statements True or False

____ Your greatest time for forgetting is within 24 hrs. after you first heard something.

____ It is a good idea to review a previous assignment immediately before going on to a new assignment.

____ It is better to study an assignment once, for a large amount of time, then several times for shorter amounts of time.

STRATEGY 7

Explain why you should set your own goals for learning new vocabulary.

MASTERING VOCABULARY

Here's a method that can help you lift your vocabulary well above its present level. It's tailored to your individual preferences. You decide the words you want and need You collect them when time is available, and not when it isn't. You set your own goals and move toward them as you wish. This method will help you not only learn, but also remember the meanings for new vocabulary words.

HOW TO MASTER THE VOCABULARY OF AUTO REPAIR
(Put These Tips to Work, and Your Dividends May Be Dramatic)

As you begin a new course in Auto Repair it may seem as if you're learning a foreign language. Difficult new technical terms crowd the pages. Easy, familiar words appear with unexpected new meanings. The everyday word between suddenly becomes technical - with an extremely precise meaning! The word exactly takes on a special meaning--even any, if, and or.

Rote memory is no longer enough. You must gain a working understanding - learn to use the new "word tools" well and intelligently. Once an unfamiliar term is defined, or a familiar term defined again, the authors will use it again and again, taking it for granted that you understand it. If you pass over these new terms lightly, word blocks will soon get in the way of your learning. Your reading will become an obstacle course. Learn the new terms thoroughly when they're introduced, and you'll have precision tools for grasping essential new knowledge to the last day of the course.

Clearly, your vocabulary abilities now become a tremendous asset. Fortunately, learning experts - in actual experiments with students - have researched learning and memory techniques. Some of the strategies suggested here are based on years of experimentation in the psychology of learning.

STRATEGY

HOW WILL THE AUTHOR ALERT YOU TO IMPORTANT TERMS?

When the key terms or concepts are first introduced to you in textbooks, the authors usually flag you with a conspicuous signal. The signal used may be **heavy black** (boldface) type, *italics*, color, and <u>underlining</u>. Words **signalled** in these ways are crucially important "official" **Auto** Repair terms.

In the passage below the authors make **important terms** stand out on the page by putting them in italics.

STOP!
LOOK!
LEARN!

The *pivot arm*, or *tower* as it is sometimes called, is connected to the damaged area of a vehicle.

ACTIVITY

Scan your own textbook and see how the authors signal important new terms. List those ways on a separate piece of paper.

Sometimes there is an "explosion" of new words - like the one below - in a very brief space. Yet every new term is basic for your future learning and calls for thorough learning and remembering.

TOOLS FOR FUTURE LEARNING

Unitized body anchor clamps can be fastened to grip firmly anywhere along *body pinch-weld flanges* on automobiles. Three or more *self-centering frame gauges* are generally required to diagnose and correct frame damage accurately.

TIPS FOR LEARNING DIFFICULT TECHNICAL TERMS

1. Pay attention to each term when it first appears. Read so that you understand the definition - not to memorize, but to get a real understanding of the meaning.

2. Take the new word apart if you can. Do you recognize a familiar part? If, for example, you recognize the familiar prefix *poly-*, meaning *many*, you already have a hold on *polygamist, polygraph, polyglot.* If you recognize the word part, *equi-* meaning *equal* it helps you unlock *equidistant, equivalent, and equation.* The familiar prefix *co-*, meaning *with* or *together with,* can help you understand *coordinate, cooperate,* and *co-worker.* (See Unit I for more word part clues.)

3. Read and reread as often as necessary. Reading-once-straight-through patterns are not very helpful. Complete stops are called for frequently. Thought time is essential in addition to reading time.

4. The author's definition of a new term is almost always followed by examples. Examine these examples and figure out whether in fact they do follow the definition.

5. Try to think of counter examples, examples which do not come under the definition. When thinking of these, you may find it helpful to change a word or two in the definition.

6. Read the definition as you read all Auto Repair materials, pencil in hand. Make notes and create your own examples.

7. Suppose as you are reading the definition of the new term, you come across a technical term you've already met in the course whose meaning you don't remember. We all forget! You have the meaning right at your fingertips through the index to your book. Use your index for instant access to the original explanation of the forgotten term.

8. As you're working with the new term, try to express its meaning in actual words - your own words.

9. You may find a "List of Some Important Terms to Learn" toward the end of each chapter. You will want to check your understanding of this list of terms. The terms the authors have selected for this list are crucial. You may also want to check your own list of key words and their meanings.

10. Make an effort to use your new Auto Repair terms.

IN SUMMING UP

1. Read to understand.
2. Look for familiar word parts.
3. Reread.
4. Study the examples.
5. Make up counter examples.
6. Be active with your pencil.
7. Use your index.
8. Self-recite.
9. Review.
10. USE YOUR NEW LEARNINGS!

MASTERY OF NEW TERMS

Should you memorize the meanings of new terms? Chances are you won't need to. Memory of the meanings of new words will often come about naturally as you go over the material, reread, do problems. This is not to encourage imprecise half-learning of essential terms. Terms in Auto Repair are defined rigorously. It is essential to get strict meanings in mind. Remembering a very close version of what has been said will be a tool in future learning.

KEY WORDS SHOULD BE "COLLECTOR'S ITEMS"

Set aside a section of your notebook as an Auto Repair Glossary. As you run across each new key term, collect it for your glossary. Keep this record up to date from day to day. Take about two minutes - that's all you'll need - to make each entry.

You may find the "divided page" handy. Make a line down the middle of a page in your notebook. In the Key Term column to the left, record the new word. In the Meaning column to the right, write the meaning carefully.

The divided page is handy when review time comes. The dividing line makes it possible to conceal the meaning completely as you check your understanding of a term later.

Mark the end of each unit - perhaps with a double line. Now when you want to go back and check on the new words you've studied in a certain unit, you'll know exactly where to find them.

If you were to do nothing more than record the new words you'd met in a unit and then lose your glossary, you would still have an advantage. The muscular act of writing, in and of itself, would have already strengthened your learning.

THE "DIVIDED PAGE"

Key Term	Meaning
	Test your understanding by covering this side.

ACTIVITY

Turn to a chapter you are presently studying in one of your course textbooks. Locate and record ten (10) key terms and their meanings in your glossary. Congratulations . . . you now have the beginnings of a helpful tool! Use it as you read further for class.

USE THE "MOST POWERFUL STUDY TECHNIQUE"

Students often ask, "How can I retain what I study?" You can learn for the future with the most powerful study technique known to psychologists!

Conceal the right-hand side of your divided page with your hand or with a cover card (index card) and try to express the meaning - not by memory, but with full understanding of what you are saying. Then lift the card and check. Continue checking until you have full understanding. Mark items that are especially difficult, and double-check these next time.

You'll find a cover card handy in other ways. Using a card to work through chapters as you review is often more effective than rereading. You can reread material and dream all the way through. The cover card forces you to concentrate as you struggle to recall what's underneath.

USE YOUR SENSES FOR FASTER, FIRMER LEARNING

Multisensory study can speed and strengthen your learning. Eyes are just one of your learning channels. Use your eyes only, and you turn on just one-third of your sensory channels for mastering a new term. What other learning channels can you use? Your auditory and motor channels.

"See it!
Say it!
Hear it!
Draw it or write it!"

As you study, see the material as you read the word and think about its meaning.

Then say the new term and formulate its meaning aloud or in a whisper. Now you're adding kinesthetic learning. As you form the sounds, the muscles of your throat, tongue, and lips are reinforcing your memory.

And as you say it, hear it. Now you call in hearing, another learning channel.

Draw a figure to illustrate the term or write down its meaning. Now you bring more learning power into play--your motor equipment. Write down just a key word or two in the definition as you express the meaning to yourself. Pencil work helps concentration; it has a "no-doze" effect.

Any writing you have already done - on a scratch sheet or on the divided page - has already reinforced your learning.

"See it! Say it! Hear it! Draw it or write it!" is all-out study - a four-way reinforcement. The variety itself helps you recall. The change of pace - eyes, ears, voice, pencil - keeps you alert and increases absorption

ACTIVITY

Use the technique you've just read to learn the ten (10) words on your glossary list. When you feel confident that you know the words, see your instructor for a post-test.

TO RETAIN LONGER, SPACE OUT YOUR REVIEWS

You can remember longer simply by the way you place your reviews. You can place your first review to minimize forgetting. Suppose you read your class assignment today. When will forgetting take its greatest toll? If your forgetting is typical, the greatest loss will be within one day. Arrange your first review to check this drop. Place it from 12 to 24 hours after you study your vocabulary terms. Reinforce immediately, and you will remember much longer. It might be a good idea to review the previous assignment immediately before going on to the new assignment.

A study expert pointed out the "Curve of Forgetting" to military officers returning to academic study after being out of school for several years.

The first student studied one hour on September 30, and six weeks later remembered very little.

FIGURE 6-7. Curve of forgetting. (Drawing reproduced by permission of Dr. Staton.)

* Thomas F. Staton, *How to Study* (Montgomery, Alabama: Box 6133, 1968), p. 59. The drawings are reproduced with permission.

The second student studied only 30 minutes on September 30, but he spaced out his reviews - 15 minutes on October 1 and 10 minutes more on October 8. On November 8 it took this student just a 5 minute review to bring back what he wanted - with 100% mastery.

FIGURE 6-8. Spaced reviews. (Drawing reproduced by permission of Dr. Staton.)

Both students studied just one hour, but the one who spaced out his reviews had far better retention.

Your glossary of terms lends itself to spaced reviews. You can have a quick run-through waiting for a friend, riding to school, waiting for a bus, between classes, just before a test.

Take care, though, that your run-throughs don't become unthinking, mechanical repetitions. Your instructors hope that as you review your terms and their meanings, you will focus on what the definition is really saying. They sound this warning: Though precise understanding is absolutely essential, too much stress on memorization of words may destroy your understanding of their real meanings.

You'll find that spaced-out reviews will pay you high dividends in aspects of Auto Repair other than vocabulary and in other school courses as well.

LEARN THE NEW TERMS FROM DAY TO DAY! THEY'LL BE YOURS TILL THE LAST DAY OF THE COURSE - AND BEYOND - AS TOOLS FOR GRASPING ESSENTIAL NEW KNOWLEDGE.

ACTIVITY

Review the same ten (10) words you were tested on at one and two weeks from today. During the fourth week, give yourself a quiz to see how much you remember at that point.

SET YOUR OWN GOALS FOR VOCABULARY

Only you can set goals for yourself! Only you can move toward them!

If you've decided to start a personal word collection, please set goals for yourself as suggested below. You'll want to consider your test score, your own judgement as to what you need, and any suggestions from your teacher.

The goals you set today are only tentative. You may wish to change them as you make progress. Your goals should be realistic. Planning more than you can possibly attain brings only disappointment.

Your teacher will discuss your goals with you.

TO IMPROVE VOCABULARY	PLANNED	FINISHED
1. How many words do you plan to have in your personal word collection (and really learn) before the end of this month?	____	____
2. Have you decided to collect a definite number of words each day? week? If so, what is your quota?	____	____
3. Some students prefer not to set a daily or weekly quota, but to collect their new words whenever the reading they are doing at the moment lends itself. If this is your decision, indicate by checking here.	____	

ANSWER KEY
PRE/POST TEST
MASTERING TECHNICAL VOCABULARY

STRATEGY 1

1. heavy type
2. italics
3. colon, also underlining

STRATEGY 2

any 8 of the following

read to understand
look for familiar word parts
reread
study the examples
make up counter examples
be active with your pencil
use your index
self-recite
review
use your new words

STRATEGY 3

Divided page glossary is a form used to make your own glossary, with terms written on one side of the page and their meanings on the other. It is an orderly way to collect, store, and learn new terms.

STRATEGY 4

A cover card is simply a card used to cover up meanings or terms to check your memory when you are trying to learn terms. It helps you concentrate on what you are studying.

STRATEGY 5

By using your sight, voice, hearing, and muscles to study a word you learn the word through a variety of senses and therefore learn the word better.

STRATEGY 6

T, T, F

STRATEGY 7

By setting your own goals, what you learn is meaningful to you, and applies directly to your needs.

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